

# THE ATARI 8-BIT NEWS-PAPER

Previously published on disk as the Atari 8-bit News-Disk

£1.50

Issue 15 - Nov/Dec 1993



- \* GAMING  
COLUMN
- \* PRINTER  
REVIEW
- \* 1050 W/P  
SWITCH
- \* AND MORE!

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The Black Box sells for \$199.95 plus \$8 shipping and handling. The Black Box with a 64K printer spooler sells for \$249.95 plus \$8 shipping and handling.

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The built-in Task Master sector editor is the most powerful editor for the 8-bit. It contains a sector copier featuring multiple copies, automatic formatting, and uses all available memory for fast disk duplication. The Task Master is not limited to only floppy disks. It can handle up to 16 megabyte hard disk partitions (even in the sector copier mode). The Task Master provides full DOS support for MYDOS, SpartaDOS, and Atari DOS derivatives. Subdirectories are fully supported! You may link through individual files by simply moving through the directory and highlighting the file you wish to edit. 16-bit and sector map linking are supported for hard disks, and 11-bit linking for floppies. It is ideal for quickly editing files and repairing damaged directories.

The Black Box Enhancer sells for \$49.95 plus \$5 shipping and handling.

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Call CSS at (716) 429-5639 between 10am and 5pm Eastern Time to order, or send your order to the address below. CSS accepts payments in cash, money order, Visa, MasterCard, or COD. Personal checks are also accepted, but shipment of your product is delayed until the check has cleared. Foreign orders must be paid in US funds.

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### SUBSCRIPTIONS

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### SUBMISSIONS

We welcome submissions from readers. They can be on any Atari-related subject. Please submit your articles on disk in ASCII format (i.e. no special word processor commands should be in). We "pay" for articles in free PD disks from our library. We usually pay around 3 disks per article.

The Atari 8-bit News-Paper is published in the UK by Dean Garraghty Software. It is edited by Dean Garraghty. Regular contributions from: Richard Gore, Alan Hitchen, and Brian Walker.

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## EDITORIAL

By Dean Garraghty

Welcome to issue 15 of the Atari 8-bit News-Paper. Why issue 15? Well, this new printed magazine is just a printed continuation of the News-Disks. We have produced 14 issues of the News-Disk, so we thought it logical to start this new printed version at issue 15. Why "News-Paper"? Well, the "News-Disk" was derived from "newsletter", but "letter" was replaced with "disk" because it was on disk. Now it is on paper, so "disk" gets dropped and replaced with "paper". Simple really!

After a lot of thought and planning, we decided that the News-Disk would be better in a printed magazine, and here it is! All issues from now on will appear in printed format. News-Disk subscribers will continue to be sent this new magazine until their subscriptions expire.

In order to produce it in printed format, we have been forced to increase the price to £6.00 for a 4 issue subscription (full price details are on page 3). We hope this won't put too many people off. It is still very good value for money!

In order for this magazine to survive we need YOUR help. We have to have 200 copies of each issue printed (it is too expensive to print otherwise), but we currently do not have anywhere near that number of subscribers. Please get all the Atari 8-bit users you know to subscribe. We need as many subscribers as possible.

Another problem we have is with the number of pages. This issue is 20 pages long, but we would like it to be more. We had to drop a couple of articles until the next issue because of this. We couldn't make this issue any longer due to costs. The only way we can add more pages to the magazine is either by increasing the price (not a good idea!), or getting more subscribers. That is why we need you to help us get as many new subscribers as possible.

If you are a first-time reader of this magazine, then you may like to consider buying a back issues pack of the News-Disks (issues 1-14) at just £6.95 the set!

Are you reading this at AMS7? If so, come along to the DGS stand and have a chat with us, and spend some money! We need all the support we can get!

This is going to be the shortest editorial I have ever written, because I am limited to just one page for this issue! In conclusion, please subscribe to this magazine if you haven't already, and please keep buying from DGS. We badly need your support! We also need articles! We would like to see articles, programs, etc. from as many people as possible. Go on, have a go!

## GAMING COLUMN

by Richard GORE

Hello there again and welcome to the third instalment of my gaming column. Well as you are no doubt aware, you are reading this column in a printed newsletter which has now replaced the old disk-based News-Disk. I won't go into the reasons behind this but I urge you all to support this venture. Don't worry though because I will continue to write this column as well as providing other articles for you to enjoy just as I did with the News-Disk. However, I will change my rating system, instead of the star rating I will give a score out of 10 in the following categories: Graphics, Sounds, Playability, Value for money and then an overall percentage. Remember they are only my opinions and you may think differently, but I hope they give you a good idea about any game that will be reviewed.

Before I go on and review two brand new pieces of software, I will update last issue's comments on the XE Demo cartridge. Since the last News-Disk was published I have had the chance to test the XE Demo cartridge on an Atari 400. Joust and Ms Pac Man worked fine but the FS 2 demo and One On One both caused the system to lock up. I still haven't had the chance to test it on an 800, 600XL or that elusive 1200XL (not to mention the even rarer 1450XLD!). While I'm on the subject of the Atari 400 I have another little tip for you. The XC12 data recorder will work fine with the 400 when you boot but once your game has loaded don't use the forward or rewind keys as this sends the 400 into never never land!

The two games to be reviewed this issue are Kult and Miecze Valdgira (MV from now on). Both of these games originate in Poland and are being sold in the UK exclusively by Tiger Developments on disk only, at a very reasonable price of £4.99 each. Both games are supplied in simple, black card board jackets with the disk sleeve glued inside. Although still a long way behind the packaging of the Infocom adventures it is quite pleasant to look at and more than most suppliers provide these days, also the stiff card protects the disk for its postal journey.

The first thing you will note when you boot either game (without BASIC) is that the game doesn't load! Due to the pirating of Tiger Development's previous releases they have been forced to introduce measures in order to protect their software. When you boot either game you are presented with a security program. You are given a two letter code which must be matched with a collection of symbols on the supplied documentation. Using a joystick (in port 1) you must then select the four symbols you found from the printed documentation and the correct colours. Only when you have correctly entered the coloured symbols will the game load and run. It sounds a bit tricky and to be honest it is, but the instructions do tell you how to use the system - they just need to be read carefully and once you get the hang of it, it becomes almost second nature. Your average ten year old child (and I suspect many other users) may not be very impressed at having to fiddle around like this just to play a game but I'm afraid that is the price we will have to pay to keep the pirates under wraps. It is a shame that any security is needed but I have to sympathise with Tiger Developments - software production takes a long time and the authors must protect their work. Once again software pirates have created another problem for the law abiding ones to live with. Right that's enough rambling lets get on with the reviews.



First up is KULT. I may as well tell you now this is a clone of Zybox, so if you liked that you are probably going to like this. After the game has loaded it first unpacks itself (at least I think that's what all the coloured lines are!) and you are presented with a simple title screen. All the graphics are monochrome, i.e. white on a black background including the title page and the high score table. After pressing fire (twice) you start your game. The screen is split into three sections with about two thirds of this being the main play area towards the centre of the screen. Above and below the play area there are status displays (a la Zybox). The top display shows how far into the level you are (and therefore how much you have left to the end of the level), your score, your number of lives left and finally the level you are on. The bottom display shows (from left to right) which of four weapons you are using, the type of nasty attacking you, how much fuel you have left, how many smart bombs you have (operated by pressing the SHIFT key) and finally well, err, I don't know what the last icon is. The instructions don't mention it and it doesn't seem to have any bearing on the game, perhaps its a 'bonus token' counter?!

The object of the game is for you to traverse the levels (left to right) in your helicopter (monochrome) shooting the nasties (a la Zybox). When a nasty gets killed some sort of bonus may appear in the form of a weapon power up, a scoring bonus, an extra smart bomb etc for you to collect (a la Zybox). Your weapons fire continually and you may cycle between them by pressing fire (a la Zybox). Collecting various icons increases their fire power and if you get killed the weapon you are using at the time decreases its power level by one (a la Zybox), the maximum setting is three. The weapons vary from a constant, single direction stream of bullets to one that fires backwards and forwards with three streams. You can lose one of your three lives in many ways, these include colliding with a nasty or the scenery and running out of fuel (which can be replenished by collecting the fuel cans).

The graphics, albeit in monochrome, are very good, there's the usual trees and fuel icons, but there are also some greek style columns, statues, tombstones, a great evil looking, horned monster and a huge building that looks very much like the White House. Artifacts are not a problem but it is present as is to be expected. The end of level guardians are also well defined and they are very hard to kill (a la Zybox) and unfortunately the smart bombs have no effect on them! The scrolling is a little jerky and the control of your ship whilst being responsive is very rough, jumping quite alarmingly when you only want a tiny movement. This makes me think the game uses a redefined graphics 0 display (rather than graphics 8) which would account for the jerky movement and also the incredible length of each level which would not be possible using a memory hungry graphics 8 display.

The sounds are a little uninspiring, the title tune is good but the game sounds are limited to muffled shots for each weapon and the odd high pitched beep when things get shot.

In conclusion the game itself is more than adequate although I just can't help comparing it to Zybox. The content is very similar, sure there are a few additions over Zybox such as the added fuel problems and smart bombs but it has to be said it is a clone. Kult also lacks a two player mode (a great feature of Zybox) and although the graphics are good they are only monochrome. The authors should have tried to put some colour in especially on the title and high score pages. It would also be very interesting to find out what the PMG system is used for, if at all. The sound department is also a little lacking. Given the

choice between Zybox and Kult I would pick Zybox every time but that doesn't mean to say Kult is below standard, far from it - Kult is well programmed and is a very good game, however you just can't improve on perfection which is what Zybox is. However, I highly recommend Kult to all you blast em up fanatics.

Graphics-----: 8  
Sound-----: 6  
Playability-----: 8  
Value for money--: 8

OVERALL: 75%

Mieciez Valdgira (referred to as MV from now on) is another new game from ASF in Poland, released in the UK by Tiger Developments. The name may be strange and I don't know what it means in English (I do suspect it is a name since the instructions refer to the sword of Valdgira in which case it has no meaningful translation, just the same as my name is Richard whether I am in England, Poland or China), but the game is a cracker, very much in the arcade adventure mould along the same lines as Black Lamp and, to a lesser extent, Spellbound. As with most Tiger Dev' games the instructions are a little sparse although they do have an excuse for this game since the people from Poland provided very few instructions for MV (and Kult actually), but basically you are on a quest to recover three swords in order to prevent the Emperor from being killed with them.

Once the game has loaded you are presented with a nicely done old English type scroll acting as a title page detailing the program's name and giving credit to the various authors, artists, musicians etc. This is accompanied by a very stirring piece of music (credited to Sound Tracker, whatever that might be). The only fault with this display and the game in general is all the text is in Polish. Having said that since the game is a puzzle it still remains very playable. With a quick press of the fire button the game gets under way.

The main screen is split into three sections, at the very top is a single status line (in Polish) showing your score, the high score, your number of lives left and the music status (more on this later). Then just over half of the screen is taken up with the main play area which consists of beautifully drawn and shaded, with blues and purples, platforms, steps etc that make up the terrain you must traverse. Various nasties fly around the screens sapping your energy and generally being a nuisance. The character you control stands in the middle of your screen ready to move at your command (use a joystick in port 1) and what a graphical masterpiece he is. He looks like some sort of super-hero, although he is shaded in similar colours the definition is superb and the animation is out of this world, his head bounces up and down as his feet move, brilliant simply brilliant even better than Frogman in Draconus. Of course, Rikthor (your character's name) can shoot at the nasties, fireballs from his eyes to be exact. The lower half of the screen is taken up with your energy status (in the form of a thin, horizontal bar) and your inventory (in the form of icons).



As your journey continues the screens flip rather than scroll, along the way you will find various items that will need to be used at some stage. Pull down on your joystick and they will be picked up (if you have any room left). When you pull down on the joystick the action is halted as you also use this method for using the items, but the instructions explain all this. As the text is in Polish some of the icons may not seem obvious but persevere, all will become clear. You meet several other characters on your travels and although they are static they are brilliantly drawn.

The graphics are really good, every effort has been made and it shows. The music is also top class but after a while it begins to grate - at this point a press of the SELECT key will silence the music and activate the sound effects, much more suitable for actually playing the game, another push on the SELECT key and everything is silent. It's this attention to detail that lifts MV well above most other software. I could go on and on and I'm sure there's much more for me to discover but I don't want to spoil it for you. Instead I'll give you a quick tip, shoot the nasties as soon as you can (you have unlimited bullets). This way you can travel between the rooms at will without having your energy drained.

The only drawback with MV is all the text is in Polish. Tiger Dev had planned to change it but everything is 'scrambled' so it was not possible in the time allowed before advertising began. However they do plan to produce a translation sheet to help the non-Polish speakers, but it is not absolutely necessary, you just need to do a bit of experimenting with those items you cannot identify straight away. I can't recommend MV highly enough, it has to be one of the best games ever released, if you like a bit of arcade action along with some puzzles you'll love this game, buy it at once.

Graphics-----: 9.5  
Sound-----: 9  
Playability-----: 9  
Value for money-: 10

OVERALL: 94%

I would just like to take this opportunity to urge you all to give as much support as you can to people like Tiger Developments (and DGS) - they work hard to bring you quality software at reasonable prices. I have been in contact with the people at Tiger Developments and I have their actual sales figures and to be honest they are pathetic. Their last advert in New Atari User failed to stir you into action to buy these games, at less than five pounds you can't go wrong, after all the people that write into the Mailbag complaining about the lack of software you would think Tiger Dev would be snowed under with orders, but no, sales are tiny. All I can say is if you want more support you MUST MUST support these people and buy software from them otherwise the support will vanish. I know finances are tight, I myself am a university student and living on zero pounds per week over the summer, but I still found the ten pounds necessary to buy the above two games. Tiger Developments will be exhibiting at AMS 7 in november and I urge you all to go there and show your support to all the 8-bit suppliers.

One final snippet before I sign off for another couple of months, Tiger Dev tell me a new 3D soccer game is being developed with vector graphics and a view from behind the player. It sounds pretty good and

it is hoped it will be ready in time for next year's World Cup!

Editor's comments: We are having the same problems as Tiger Developments. We try hard to get the rights to software and then nobody buys them. We just cannot run a full-time business on the sales we currently have. I would ask you all to spend as much as you can with DGS, just so that we can survive!

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## SNIPPETS

by Richard GORE

Did any of you watch Games World on Sky One on Tuesday the 28th of september 1993?

Well if you did you'd have seen Archer Maclean relaxing by his swimming pool and driving around in his open topped red Ferrari (just like Magnum's) with his private registration plate 147 RED. Whos Archer Maclean? Shame on you, remember that super space shoot em up DROPZONE, well Archer Maclean wrote it. This guy is now very wealthy with his earnings from writing computer software. His last project was a snooker game (Jimmy White's Snooker I think!) viewed from table top level (hence his private car registration plate) and it is quite simply brilliant. The downside, yes well its not on the Atari 8-bit of course but you didn't expect it would be did you? Just to think this man who started out writing a game for our beloved Atari computers is now very very rich and writing games for his own software company and making even more money.

On the television program DROPZONE did get a mention (very briefly) but unfortunately the Atari 8-bit machines didn't, one day I might end up like Archer!!! Oh well I can dream.

Enough about games how about a tip for AtariWriter Plus. Positioning the cursor over a letter and pressing CONTROL and CAPS together will invert the case of that letter, i.e turn uppercase A into lowercase a, or vice-versa. The cursor will also be moved onto the next letter so you can invert the case of a whole word or sentence etc.

All Micro Show 7

It's here again!

Saturday 13th November 1993

Bingley Hall, Stafford.

10am - 4pm



## The Panasonic KX-P1123 Printer

by Dean Garraghty

As you all may know, I have been using an Atari XMM801 for four years now, and I've never had much in the way of trouble with it. However, at the end of September my trusty XMM died a painful death. I tried desperately to revive it, but it had well and truly fried! I nearly cried! A long and trusty companion, that had been all over the country with me and provided hours of service, had suddenly been called to printer heaven! What the heck would I do now?

Well, there was little hope of getting another XMM at short notice, so I decided that I had no choice but to buy a non-Atari printer. But which one? There are literally hundreds of different printers out there, ranging from your average £100 9-pin dot matrix, through to your £2000 laser printers. So which should I buy? Well, the £2000 range is way out of my budget, so I had to set my sights a lot lower. But, I wanted to try something a little better than a standard 9-pin dot matrix. I basically had two choices: a 24-pin dot matrix, or a bubble jet. I am not a strong follower of bubble jet printers. They can't print on as wide a range of materials as I would need, and they are messy. Ink tends to be wet long after printing finishes, and it tends to smudge all over the place! Not what I would want! So, a 24-pin it would be.

But which one? The range of 24-pin printers is immense. I dug out my copy of Micro Mart and Computer Shopper and started looking around. There was a snag though. All these companies were miles away, and I'd have to wait for the dreaded cheque clearance, delivery and so on. I just couldn't wait two weeks for a new printer. You can't run a business with no printer! What would I do now?

It was obvious that I would have to try and get one locally. But where? Tandy? Local computer shops? Well, both these options sounded good until I saw the prices! But then it hit me! Argos sell printers! A quick look in the catalogue and I noticed they had a range all the way up from 9-pins to bubble jets. In amongst these were two 24-pin printers. The one which caught my eye was the Panasonic KX-P1123. So, down to Argos to see if they had one in stock. Amazingly (!), they did! So that's the story behind the printer. Now let me tell you about the printer itself.

The KX-P1123 (KX from now on), is a 24-pin monochrome impact dot matrix printer. The first thing you should be aware of is that this thing weighs in at over 7 Kilos! The box comes with a carrying handle, but that didn't help! It is also physically big at 16.7 (W) X 13.4 (D) X 5.2 (H) inches. Make sure you have plenty of space on your desk!

The KX looks like something out a 60's science fiction film! There are no fewer than 12 LEDs on the front, and 5 buttons! And you can make them flash! There are also 3 levers on the top of the printer, and we haven't even mentioned the power switch yet!

Let's now talk about the KX's features. Well, all those flashing LEDs do have a purpose! The KX is a fully programmable printer. Many printers use tiny dip switches for you to set the printer up to your own needs, but the KX is far too clever for all that! Instead of dip switches, you set the printer up using a set-up procedure. Doing this is quite tricky at first, but you soon get the hang of it. Basically,

the manual shows a diagram which you follow in order to set things up like auto line feed on, paper out sensor off, print direction and so on. By using rows and columns of a table, and different combinations of off, on and flashing LEDs, you are able to set certain features on or off. This takes a lot of practise! The printer then stores your set-up, which will be available automatically even after the printer is turned off!

Loading paper into the KX was something of a nightmare for an old XMM user like me! The KX can take cut sheet as well as continuous paper (using either friction or tractor feed). But, tractor fed paper can be loaded in two different ways. You can either top feed or bottom feed the paper. The manual has lots of nice little diagrams to show you how, but I still managed to crumple up lots of paper! For cut sheet paper, you can use the single sheet paper feeder which sits on top of the printer at an angle of about 45 degrees. This has two movable guide rails. Basically, you just pop your paper down inbetween them and it will be aligned perfectly. The KX also has a nice feature found on most good printers these days. It has an automatic paper park. Basically, this means you just put your paper in, pull a lever, and the paper appears ready for printing. This saves loads of time! You can even program the start position of your paper, and you can even set up three different start positions for cut sheet, top fed, and bottom fed continuous. Very clever!

The KX can also be programmed to do quite a number of things. The size of the letter quality fonts can be changed, the size of the paper you plan to use can be changed, the text can be "enhanced" using bold, italic and more! The really clever feature of the KX is the Macro feature. Basically, you can define three totally different set ups for the printer in terms of paper size, font, widths, etc. and store these in the printer's memory. These macros can then later be called (they are stored after power off). This is great if you plan to use the KX with a number of different systems.

The KX has three draft fonts as standard, as well as four Letter Quality fonts: Courier, Prestige, Bold PS, and Script. You are reading this article in Courier! Examples of these fonts are shown in figure 1. You can change the font using the front panel, or you can send control codes to the printer via software.

The KX emulates both Epson LQ-850 and IBM Proprinter X24. In other words, this printer is both Epson and IBM compatible! The manual lists all the control codes.

The KX, as supplied, comes with a standard parallel Centronics interface, but a serial interface card is available as an option. The KX also has a 10K buffer, but a 32K buffer is also available as an option. Having the 32K buffer would allow you to define your own "download" fonts for the KX. This lets you define characters in software and then download them to the KX to use as standard fonts. Really heavy stuff!

The KX is able to print on standard paper, as well as envelopes and labels. It can take 3 pieces of paper at one time for multiple copies. A lever on the printer allows you to adjust the print head distance. For example, if you are using thin paper then you would move the head closer to the paper, and vice versa.

The KX also has a useful "quiet" button. Pressing this will make the



printer operate in quiet mode, but printing speed is reduced.

Supplied with the KX is a ribbon, and a manual. The power cable also has a pre-fitted plug (or at least the UK version has, I'm not sure about other countries). The ribbon is a fabric ribbon, which seems to have a built-in re-ink system! If the print starts to fade, then you just push in this button on the bottom and it re-inks itself!

The manual is quite a hefty thing, but reads like an academic paper! It is very confusing in parts, and is just full of useless sections. It even has a lengthy section on interfacing, and goes into intricate detail about how the Centronics system works. There's even a timing diagram in there. This stuff really isn't needed. My KX is connected via my 850 interface and it works fine. I also know that it works with the microprint interface. Here's a couple of tips. You must set auto line feed on, because it won't print a thing if you don't! Also, it will not work with Atariwriter because A/W sends bad control codes out, and it will just print nothing. You can use Atariwriter plus. Just select it as an Epson printer. It also works fine with Textpro. I have also tried mine with various graphics dumps (including Seepic) and it works OK.

Now on to prices. I paid £175 for mine, but you can get it for around £20 less than that if you buy from any of the suppliers in Micro Mart.

In conclusion, I'm very happy with my KX. The print quality is very good for a printer of this price. It has many features usually only found on very expensive printers. The programming facility of this printer is particularly good. The printer is let down badly by the manual, but then most are!

#### Trademarks:

IBM and Proprinter are trademarks of IBM corporation

Epson is a registered trademark of Seiko Epson corporation

#### Figure 1 (Test Prints):

This is draft!

This is courier!

This is prestige!

This is bold PS!

This is script!

## BUILDING A 1050 WRITE PROTECT SWITCH

by Alan Hitchen

One of the bugbears of owning a disk drive is the write protect notch. The tricky business of cutting out a notch to use the flipside of a disk and then sticking and unsticking labels to protect and unprotect the disk.

The answer of course is to install a write protect switch. A ready made kit is available from Micro Discount for £7.95 (reviewed in Page 6 No.58), but as I have some experience of DIY electronics I decided to make my own.

So using the plans in Page 6 issue 43, I began by unearthing the components required from my hoard of electronic junk. I had plenty of wire but no suitable socket, so I substituted a section cut from a broken IC socket. The switch specified was a DPDT toggle, I used a slide switch. The plans showed a two in one LED and the latest kit version uses a flashing two in one. As I had neither I used two standard 5mm LEDs. To avoid damage to the disk drive case I decided on a separate box to hold the unit. I discovered that the plastic case of a 1289 torch battery would do just fine.

Starting with the case, after discarding the contents I drilled the base for the cable entry. Next the lid was drilled for the two LEDs and the switch. The switch needed a rectangular hole so pilot holes were carved square with a Stanley knife. I had intended to fit the switch internally using bolts or glue. However as I had damaged the lid I decided to fit the switch externally as an interference fit in the hole to cover this up.

Having installed the switch and LEDs in the lid I then wired them up, with sleeving as required to prevent short circuits. The wires to the socket was then fed through the hole in the case and the lid glued on.

Unscrewing the disk drive I removed the top of the case. I decided to position the switch box at top left front and stuck it down with Blu Tak. I then fed the wire through one of the ventilation slots and soldered the socket on the end to complete the construction.

I located socket J11 at the left side, first in a line of sockets when looking from the front. It was tight, so I used needle nose pliers and gently unplugged it, and then tucked it out of the way. Using the pliers again I inserted the new socket onto the top three pins (the first pin is unused), making sure it was the correct way round. I then re-assembled the drive casing and the job was complete!

Testing proved it was working correctly. However, I noticed that the red LED was very bright. My multimeter told me that the current was too high at 26mA (max allowable is 20mA). A series resistor was needed to limit the current to around 10mA. Adding a 240 Ohm resistor solved the problem nicely. The green LED was within its 30mA limit at 24mA. Adding a 100 Ohm resistor will bring it down to the ideal 20mA but I didn't bother.

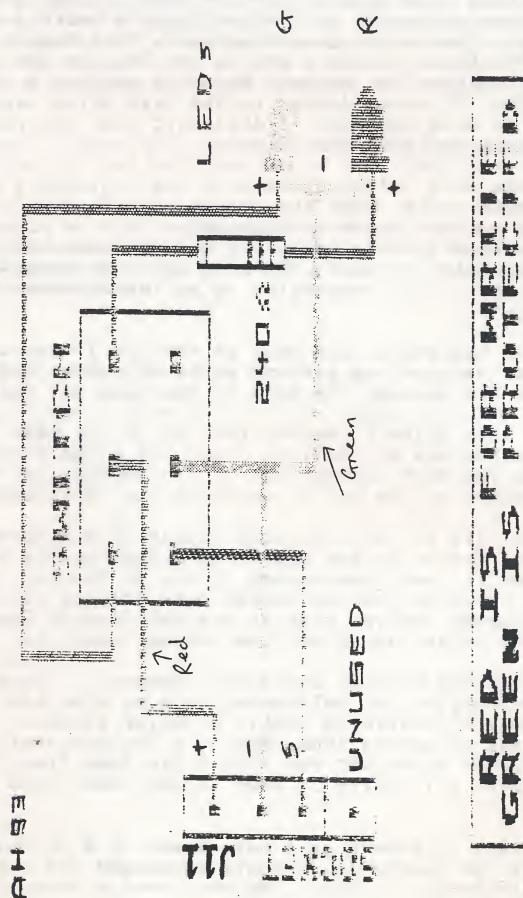
For those who want to have a go I have drawn up a circuit diagram (figure 1). For the components I would recommend The C.R. Supply Co., 127 Chesterfield Road, Sheffield, S8 0RN. Send a stamp for their latest



lists. Please remember to check the polarity of whatever type of LED you use. The standard 5mm type I used mark the cathode (-ve) with a flat on the case and a short lead.

Needless to say the usual disclaimers apply, don't blame me if things go wrong. If in doubt don't do it yourself, try the Micro Discount kit instead. Finally I must say after using a write protect switch I wouldn't want to be without one again.

[ D.G.S./News-Paper warning: We have done our best to ensure the accuracy of this article. However, please be warned that any damage caused to your disk drive as a result of attempting this project is not the responsibility of D.G.S. Please take care when attempting this project. ]



## A Year on.....

by Brian Walker

A few News-Disks ago I contributed a couple of articles in which I was reflecting on what I wanted from a computer and speculating on which computer I might be using in the future. Well, one year later...

I occasionally, very occasionally, unpack my ST to play the odd game. I recently bought an original second-hand copy of Millenium 2.2 for three pounds. Thank goodness I didn't buy it when it was first released and pay thirty or so pounds for it. Although I enjoyed playing it at the time, after completion there is now no incentive to ever play it again. And what a disappointing finale! It brought back memories of Archon on my 8-bit when I beat the computer for the first time, an anti-climax. But I still regularly want to play Archon. It still comes down to good game-play and not just flashy graphics that count. To be honest with myself though there are a few 16-bit games that I am attracted to and may buy. Perhaps Railroad Tycoon and Civilization, that is if I ever get around to expanding my 520 to one meg.

But, a year on and pride of place on my desk still goes to my Atari 8-bit. Why? Because everything I want to do with a computer I can still do with my 130XE.

I play games of course. I use a wordprocessor to write the odd letter or to write the occasional article for the News-Disk. I use other utilities such as an appointment calendar, label maker, disk cataloguer etc. If I need it, it's available, and there is still commercial software coming through (see D.G.S. for instance). Also there are many programs in the public domain of excellent quality (again see D.G.S.).

What are the alternatives?

One of the games consoles? Sega?, Nintendo?, Atari Jaguar even (if ever, Ha!). No thank you, and the cost of those cartridges!

PC? - too expensive for me.

Atari Falcon? - I've never seen one for sale in any computer shop I've ever visited. Still too expensive anyway.

Commodore Amiga? - with the recent drastic price cuts it's wiping the floor with the ST even more convincingly. I know a number of people who have bought 600s recently, parents, with the explanation that they are buying them for their children 'to learn about computers'.

That's now the main reason I have a computer. Even at the new low price I am still not tempted to buy an Amiga. I would find a 16-bit a bit too daunting and it would become, as did my ST and, as those parents are discovering, just a substitute for a games console. My Atari 8-bit is still the computer for me.

What progress have I made over the last year? I've learned a lot and know at least the basic theory of page-flipping, display lists, vertical blank interrupts, etc, etc, and am not intimidated by such terms as I used to be. I'm still very much a beginner though with a lot still to learn.



I have no inclination at present to write a particular program. I'm just enjoying the learning process itself and finding out how programs work. It does, however, make me realize the effort that goes into writing even the simplest of programs and to appreciate the sheer elegance of a program well error-trapped, user-friendly and useful especially if based on an original idea. That programmer is an artist.

Maybe someday I will write my masterpiece.

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AMS 7 UPDATE: The Yorky will be available at AMS 7, being sold and demonstrated on DGS's stand, plus buy a Yorky for £50 and get a FREE copy of a single pass disk copier designed for use with the Yorky (free at AMS 7 show only, usual price £2) and you won't have to pay any postage! Be there early to avoid disappointment or reserve your Yorky today by phoning the above number.

## A SHORT HISTORY OF COMPUTERS

by Alan Hitchen

French scientist and philosopher Blaise Pascal, produced 'The Pascaline' mechanical calculator in 1642, which could add and subtract. In 1694 Gottfried Leibnitz improved the mechanical calculator with the stepped reckoner mechanism. The commercial version 'The Arithmometer' appeared in 1820 and 1500 were sold.

The most famous name in mechanical calculators is Charles Babbage. He designed his Difference Engine in 1821 to compile logarithm tables. Unfortunately, its complexity defeated the engineering of the day and it was abandoned in 1833. Undeterred he next designed the Analytical Engine. This was to be the world's first programmable calculator. The machine had an input where numbers were entered on punch cards. The store held the numbers as required. The mill performed the arithmetic. The output printed the answer. The control unit was programmable for the type of calculation by punch cards. It was never completed. His son Henry built a four function calculator, based on his father's designs, after his death in 1871.

In 1930 Dr. Vannevar Bush of the Massachusetts Institute of Technology produced his Differential Analyser. It was an electro-mechanical device, but it was still just a calculator, albeit a powerful one. However, things were about to change.

Research mathematician George Stibitz created his Model K (for Kitchen) computer in 1937. This was a device using relays that could add binary numbers. Developing the idea at Bell Labs, his Complex Number Calculator was completed in 1939. Bell was not very interested in developing it, but the U.S. Army was, they took delivery of five relay computers for ballistic computations. This range reached its peak in the BTL6 of 1949.

Meanwhile in Germany, engineering student Konrad Zuse began work on a binary computer in 1936. The Z1 was a mechanical demonstration model. The Z2, completed in 1939, used relays. The idea of using electronic valves was considered in 1938 but was rejected as impracticable. Military funding for a code breaking model was refused in 1940. Continuing to work unaided, the Z3 was built in 1941 and the Z4 in 1945. His company, Zuse AG, founded in 1949 would form the basis of the German computer industry.

Back in America, Harvard engineer Howard Aiken had designed a relay computer, based on the ideas of Babbage, in 1937. He persuaded IBM to build the Harvard Mark I computer in 1939. It was finally completed in 1944. The Mark II arrived in 1947. The Mark III in 1950 and Mark IV in 1952. These relay computers were large, expensive, and only ten times as fast as a mechanical calculator, but they could work 24 hours a day.

During the war America was desperate for accurate ballistic tables. Physics Professor John Mauchly proposed an electronic computer in 1942 but it was not until April 1943 that the Army sanctioned the building of the Electronic Numerical Integrator and Computer - ENIAC. It finally entered service in February 1946. It was a huge device containing 18000 valves. It could handle numbers of up to 20 digits and hold 10 of these numbers in its store. It was also very fast, up to 5000 calculations per second.



Work began on EDVAC - Electronic Discrete Variable Automatic Calculator in 1946. It was eventually completed in 1951 as John Mauchly and J.P.Eckert had left the project to form their own company. After creating BINAC for Northrop Aircraft, they produced the first commercial computer UNIVAC 1 in 1951. Remington Rand bought the company in 1952 and sold 48 units, the last of which was turned off in 1970.

Mathematician John von Neumann had worked with Alan Turing in the late 30s and published a paper on computer design in 1946. After working on EDVAC he created the IAS computer at the Institute of Advanced Studies at Princeton in 1952. This computer was to heavily influence future computer design.

It had been thought that ENIAC was the first electronic computer. However the UK government revealed in 1975 that an electronic computer, code name Colossus, was operational at Bletchley Park in December 1943, and that ten units were operational at the end of the war. These 1500 valve code breaking machines were built by Professor M.H.A. Newman and T.H. Flowers, based on the ideas of Dr. Alan Turing. Development was continued on the Colossus design at the Radar and Telecommunications Research Establishment until 1963.

At the National Physics Laboratory, Turing designed the very powerful Automatic Computing Engine - ACE, before joining the Manchester University team in 1948. ACE was eventually built in 1957 after the pilot ACE had been constructed. This was to form the basis for the English Electric range of commercial computers.

The first stored program computer was the Manchester University Mk 1 of 1948. Manchester also collaborated to produce the Ferranti Mk 1 in 1951, which lead to the Pegasus of 1959, followed by the Mercury and Atlas models in the 60s.

Cambridge University produced EDSAC - Electronic Delayed Storage Automatic Calculator, a scaled down version of EDVAC, in 1949. This design influenced the development of the Lyons Electronic Office, the LEO 1 commercial computer of 1954. Birkbeck College produced models based on the IAS design, which were the inspiration of the commercial units made by BTM, later ITC, now known as International Computers Ltd.

The mighty IBM despite building the Harvard computers was not interested in this area until approached by the US government. It built the IBM 701, based on the IAS design, in 1953. It was surprised to get 18 orders for this model. Now convinced there was a demand for computers, the IBM 702 and 704 were launched in 1955 for commercial use. Transistors, invented in 1947, supplanted the valve in the 7000 series of 1959. Integrated circuits, invented in 1958, appeared in the IBM 360 of 1964.

The Intel Corporation, founded in 1968, pioneered the development of memory chips. And it was here that Marcian E. Hoff produced the first microprocessor, the 4004, in 1971. The first home computer seems to be the Altair 8800, launched as a kit in December 1974. It used the Intel 8080 microprocessor and had 256 bytes of RAM. It cost \$397.

In 1976 the 6502 microprocessor was launched and used in the KIM 1 kit computer. The home computer boom was now just around the corner, the

Atari would join it in 1980. The rest of the story is as they say history. However, unlike its contemporaries the Atari Classic is not yet forgotten.

[ As you can see, a lot happened before the home computer boom! This did not happen overnight! - Ed. ]

### Dean Garraghty Software For Atari XL/XE software!

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\* News-Disk/Paper. We publish a new printed magazine, called the News-Paper. Issues 1-14 of this were published on-disk as the News-Disk, and can be bought as a back issues pack for just £6.95. These disks are packed with articles from all around the world. A subscription to the News-Paper costs just £6 for 4 issues (UK price).

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